

Monolithic Digital IC

LB1268

**3-Channel, High-Current,
Low-Saturation Driver Array**

Features and Functions

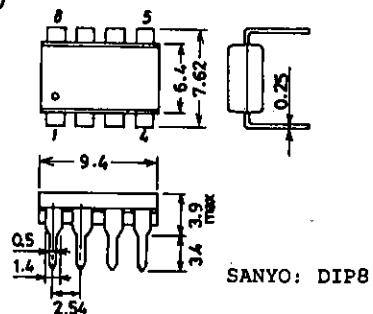
- 3-channel magnet driver
- High current (2.0A max.) and low saturation voltage (1.5V)
- Parallel operation capability (channel 1 + 2)
- On-chip spark killer diodes

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit	
Maximum Supply Voltage	V_{CC} max	8.0	V	
Output Supply Voltage	V_{OUT}	10.0	V	
Input Supply Voltage	V_{IN}	12.0	V	
Output Current	I_{OUT1} I_{OUT2}	ton \leq 50ms, duty = 20%, solenoid drive stage (ch1,2) ton \leq 50ms, duty = 5%, motor drive stage (ch3)	1.0 2.5	A A
Spark Killer Diode Forward Current	I_{FSM1}	t \leq 5ms, duty = 5%, solenoid drive stage (ch1,2)	1.0	A
	I_{FSM2}	t \leq 5ms, duty = 5%, motor drive stage (ch3)	2.5	A
V_{CC} Instantaneous Flow-Out Current	I_{CCP}	t \leq 5ms, duty = 5%,	3.0	A
GND Pin Flow-Out Current	I_{GND}	t \leq 5ms, duty = 20%,	3.0	A
Allowable Power Dissipation	P_d max	785	mW	
Operating Temperature	T_{opr}	- 20 to + 75	$^\circ\text{C}$	
Storage Temperature	T_{stg}	- 40 to + 125	$^\circ\text{C}$	

Allowable Operating Range at $T_a = 25^\circ\text{C}$

			unit	
Supply Voltage	V_{CC}	3.0 to 7.0	V	
Input 'H'-Level Voltage	V_{IH}	$I_{OUT} = 300\text{mA}$	3.0 to 11.0	V
Input 'L'-Level Voltage	V_{IL}	$I_{OUT} \leq 100\mu\text{A}$	- 0.3 to + 0.7	V

**Package Dimensions 3001B-D8IC
(unit : mm)**

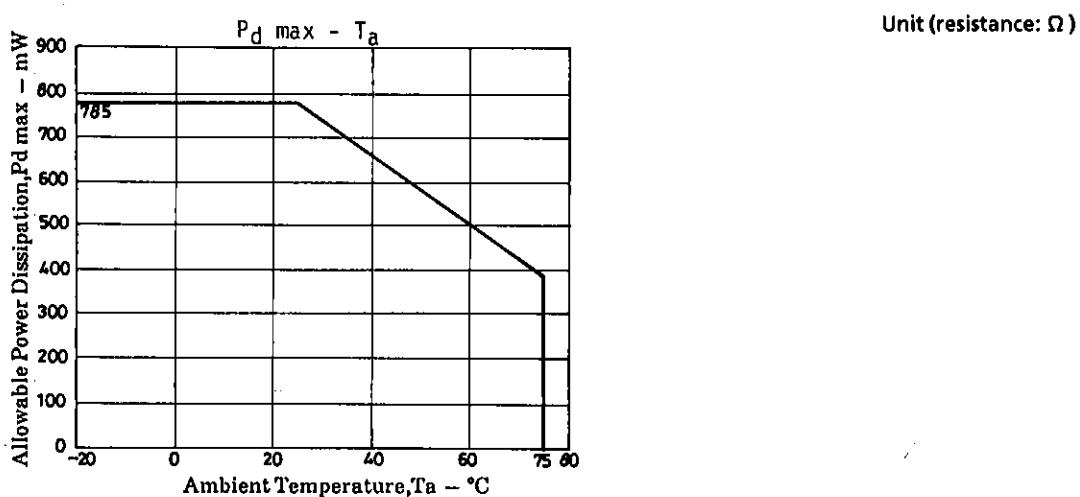
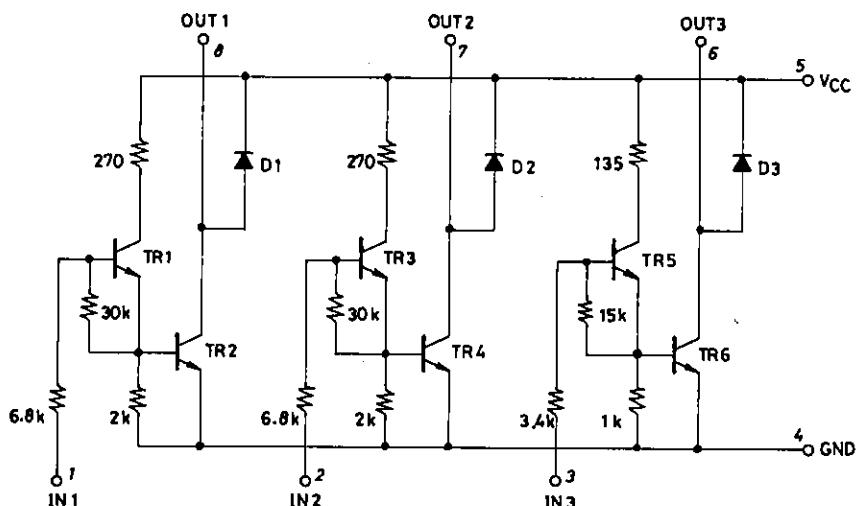
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Electrical Characteristics at $T_a = 25^\circ\text{C}$			min	typ	max	unit
Output Voltage	V_{OH1}	$V_{IN} = 4.5\text{V}, V_{CC} = 5.0\text{V},$ $I_{OUT} = 500\text{mA}$ (ch1,2)		0.65		V
	V_{OH2}	$V_{IN} = 6.0\text{V}, V_{CC} = 7.0\text{V},$ $I_{OUT} = 1000\text{mA}$ (ch1,2)		1.4		V
	V_{OH3}	$V_{IN} = 6.0\text{V}, V_{CC} = 7.0\text{V},$ $I_{OUT} = 1600\text{mA}$ (ch1,2 parallel)		1.4		V
	V_{OH4}	$V_{IN} = 3.0\text{V}, V_{CC} = 3.0\text{V},$ $I_{OUT} = 300\text{mA}$ (ch3)		0.25		V
	V_{OH5}	$V_{IN} = 4.5\text{V}, V_{CC} = 5.0\text{V},$ $I_{OUT} = 1000\text{mA}$ (ch3)	0.5	0.7		V
	V_{OH6}	$V_{IN} = 6.0\text{V}, V_{CC} = 7.0\text{V},$ $I_{OUT} = 2000\text{mA}$ (ch3)	1.0	1.5		V
Input Current	I_{IN1}	$V_{IN} = 6.0\text{V}$ (ch1,2)		1.0		mA
	I_{IN2}	$V_{IN} = 6.0\text{V}$ (ch3)		2.0		mA
Power Source + Output Leakage Current	I_{OFF}	$V_{IN} = 0.5\text{V}, V_{OUT} = V_{CC} = 6.0\text{V}$		30		μA
Spark Killer Diode	V_{F1}	$I_F = 1000\text{mA}$ (ch1,2)		3.0		V
Forward Voltage	V_{F2}	$I_F = 2000\text{mA}$ (ch3)		3.0		V
Output Sustain Voltage	$V_{O(sus)}$	$I_{OUT} = 400\text{mA}$	10			V

Equivalent Circuit



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